

RESERVE COPY PATENT SPECIFICATION

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COMPLETE SPECIFICATION

"Improvements in or relating to electric meter panels."

We, COMPAGNIE GENERALE D'ELECTRICITE, a French Body Corporate, of 54, Rue La Boetie, Paris (8e), France, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to panels of the type employed to support electric subscribers' meters and circuit breakers, and is concerned more particularly with a panel combined with apparatus for disconnecting such meters from the distribution system.

It is the object of the invention to provide an electric meter panel wherein a disconnecting device is disposed in a recess formed within the body of the panel.

According to the present invention there is provided an electric meter panel having a substantially plane face serving to support a meter or meters, wherein a device for disconnecting the meter or meters from the electricity supply system is located in a recess formed within the body of the panel and wherein a detachable closure plate serves to cover said recess, the plate, when secured to the panel, being flush with the face of the panel.

In a preferred embodiment of the invention, the meter panel is composed of plastic insulating material, and the disconnecting device may consist of a switch of the type comprising movable cross-bars.

The incorporation of a disconnecting device within a meter panel enables an apparatus of reduced dimensions and of improved appearance to be provided due to the absence of a separately fitted casing. The elimination of the separate casing for the junction means results in a reduction of the cost of the whole assembly.

The arrangement employed also has the advantage of being convenient to handle and very easy to connect to the supply system and to the meter mounted on the panel. Finally,

(Price 3/-)

the arrangement enables perfect insulation of the disconnecting device to be obtained, the terminals being surrounded by a thick partitioning of plastic insulating material.

For a better understanding of the invention and to show how the same may be carried into effect, reference will now be made to the accompanying drawings in which:—

Fig. 1 is a plan view of the panel;

Fig. 2 is an underneath view of the panel, 55 showing the passage of the wires to the disconnecting switch;

Fig. 3 is a view of the disconnecting switch with the inspection plate removed;

Fig. 4 is a view of the rear face of the 60 inspection plate of the disconnecting switch;

Fig. 5 is a sectional view of the disconnecting switch taken along the line V—V of Fig. 6; and

Fig. 6 is a view of the disconnecting switch 65 provided with the inspection plate.

As illustrated in Figs. 1 and 5, the disconnecting device is disposed in a recess formed within a panel of plastic material and in the body thereof. This recess is closed off 70 by a plate *a*, the upper face of which is exactly level with the upper surface of the panel serving to support the meter and the circuit breaker. Located within the recess are two leading-in terminals *f*, and two leading-out 75 terminals *g* connected by wires to the meter mounted on the panel. The connection between the terminals *f* and *g* is effected by recessed pivoting bars *h* adapted to be locked by screws. The disconnecting is effected simply by pivoting the contact bars and locking them in the circuit-breaking position.

The plate *a* of plastic material by which the recess which houses the disconnecting device is closed is secured by a pair of lock nuts 85 screwed on to a pair of screw-threaded rods *b* fast with the body of the panel. The screw-threaded rods have apertures therein for the passage of a sealing wire for ensuring inviolability of the disconnecting device, which can 90

only be manipulated by the authorised agents of the electricity supply company.

The panel is designed to afford ready access to the leading-in terminals of the device for disconnecting the electric current supply cables. The latter pass beneath the panel through holes *d* in movable plates of plastic material and through the wall of the recess. The cables are located in recesses *m* formed in the ribs *n* which reinforce the rear face of the panel.

In addition, the junction device is arranged so as to permit the best possible utilisation of a central window *c* for the passage of the cables which, on the one hand, connect the disconnecting device to the meter disposed in the upper part of the panel and, on the other hand, connect the meter to the circuit breaker, which is disposed on the lower part of the panel.

The disconnecting device is designed in such manner that all the cable junctions are effected beneath the rear face of the panel, whereby both the external appearance, and the insulation of the cables from one another is improved by virtue of the fact that the cables are guided and maintained in position by the recesses formed in the reinforcing ribs of the panel of insulating material.

The panel is secured by means of two screws *e* which have been sealed and two unsealed screws *e'*.

Fig. 5 illustrates a particular constructional form of plate for closing the recess in which the disconnecting device is housed, the said plate *a* having on its rear face two ribs *j* adapted to be fitted into the recess in which the disconnecting device is housed. The ribs *j* are disposed along the connecting bars *h* and prevent the exact positioning of the closure plate when the connecting bars *h* are not in the closed-circuit position, that is to say, with the meter connected to the supply system.

Arranged within the recess for housing the disconnecting device is a rib *i* parallel to the rib *j* of the plate *a*, so that the rib *j* is lodged between the bar *h* and the rib *i* when the inspection plate is in the closed position.

The closure plate *a* also has on its rear face four small bosses *k* disposed opposite the locking screws of the connecting bars, which bosses cannot be correctly positioned if the locking screws are not fully tightened, that is to say, if the connection to the supply system has not been properly effected.

The rear face of the closure plate is provided with a peripheral rib *l* forming a tenon which is adapted to fit into a rabbet of equal length formed in the upper part of the recess for the disconnecting device.

The rib *l* is provided in order to prevent the consumer from making an unauthorised current connection by sliding a wire between the plate

and the body of the meter panel to the terminals, without having to break the official seals engaged in the screws *b*.

What we claim is:—

1. An electric meter panel having a substantially plane face serving to support a meter or meters, wherein a device for disconnecting the meter or meters from the electricity supply system is located in a recess formed within the body of the panel and wherein a detachable closure plate serves to cover said recess, the plate, when secured to the panel, being flush with the face of the panel.

2. An electric meter panel according to Claim 1, wherein the disconnecting device consists of a switch of the type comprising movable cross-bars, the latter being turnable about pivot means and lockable in position by screws.

3. An electric meter panel according to Claim 2, wherein the panel and the closure plate of the recess in which the disconnecting device is housed are composed of plastic insulating material.

4. An electric meter panel according to any one of Claims 1 to 3, wherein the supply cables pass along the rear face of the panel and through the wall of the recess, the insulation of the cables from one another being improved by means of recesses formed in ribs by which the panel is reinforced, the cables being guided and maintained in position in said recesses.

5. An electric meter panel according to Claim 2 or 3, wherein the closure plate has on its rear face a boss which is adapted to engage in the recess which houses the disconnecting device, and which prevents the positioning of the closure plate when the cross bars for connecting the terminals within the disconnecting device are not in the closed-circuit position.

6. An electric meter panel according to any one of Claims 2, 3 and 5, wherein the closure plate comprises a boss located opposite a locking screw for the connecting cross-bars, whereby the plate is prevented from being placed in position when the locking screw is not tightened.

7. An electric meter panel according to any one of Claims 2, 3, 5 and 6, wherein the closure plate is provided at its outer periphery with a rib forming a tenon which is adapted to engage in a groove formed in the upper part of the recess in which the disconnecting device is housed.

8. An electric meter panel substantially as hereinbefore described with reference to the accompanying drawings.

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Fig. 1

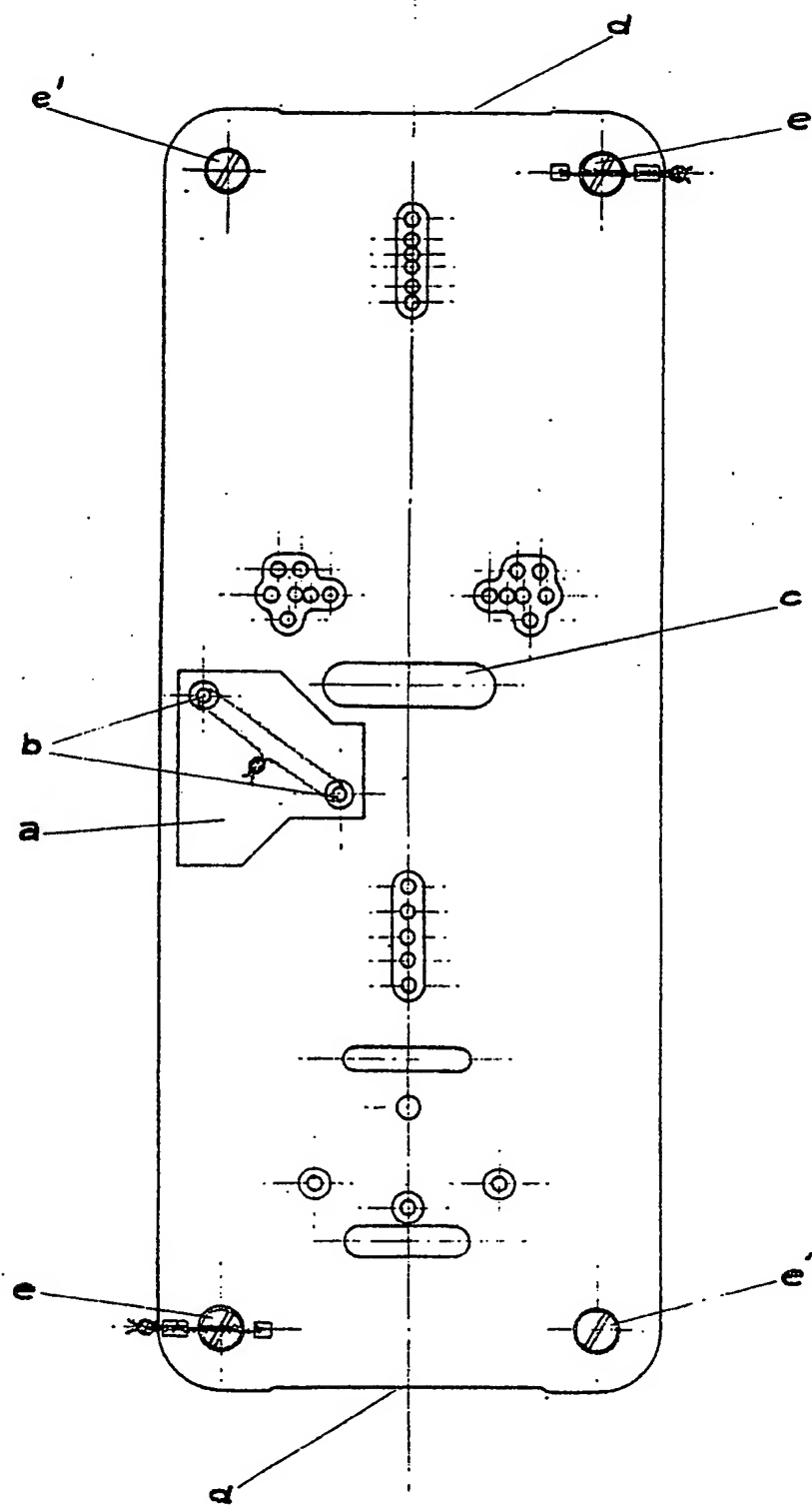


Fig. 2

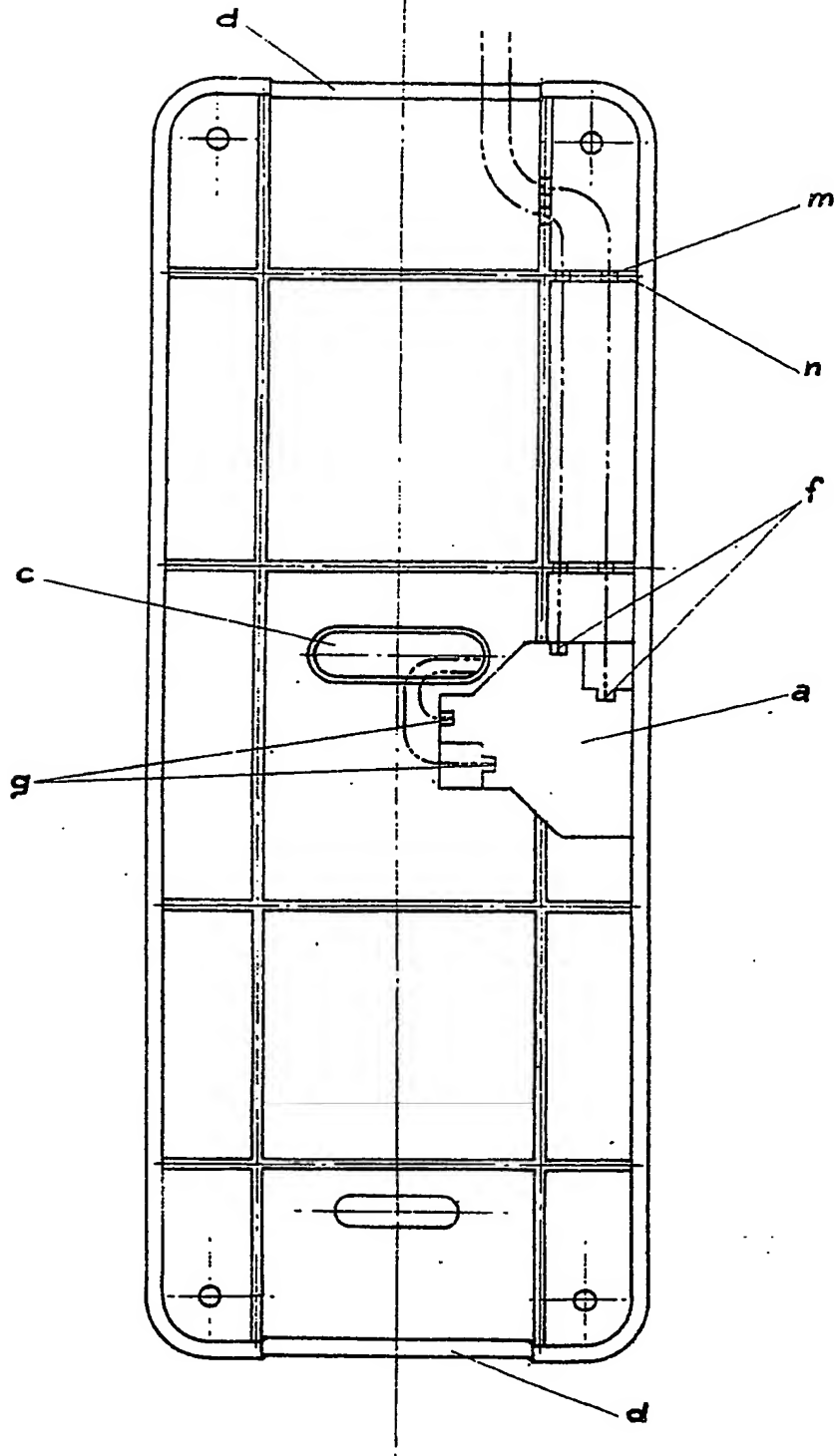


Fig. 1

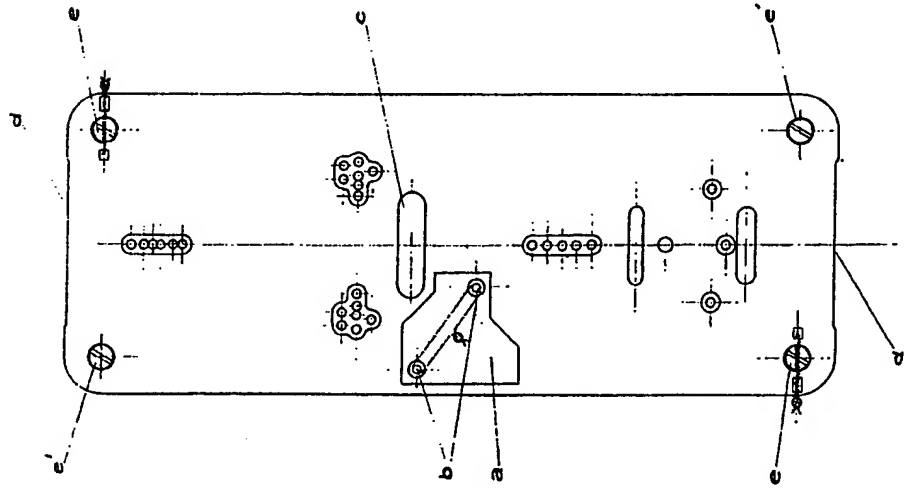


Fig. 2

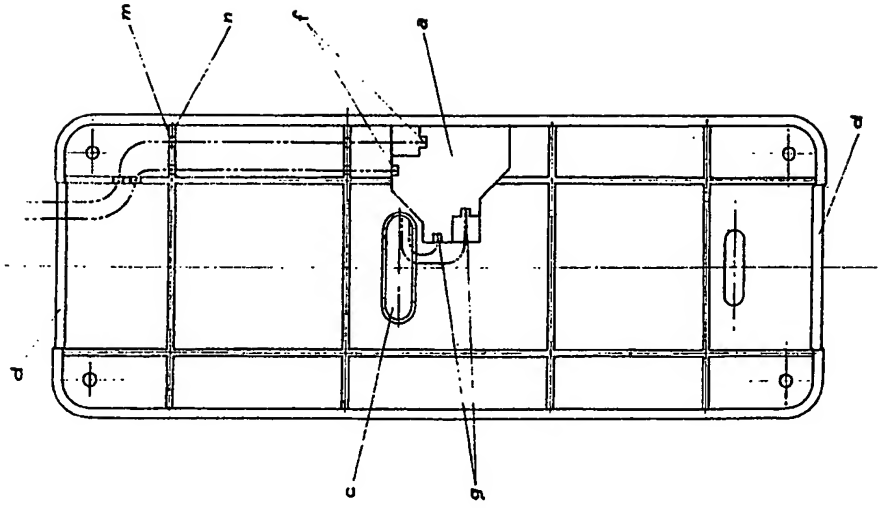


Fig. 3

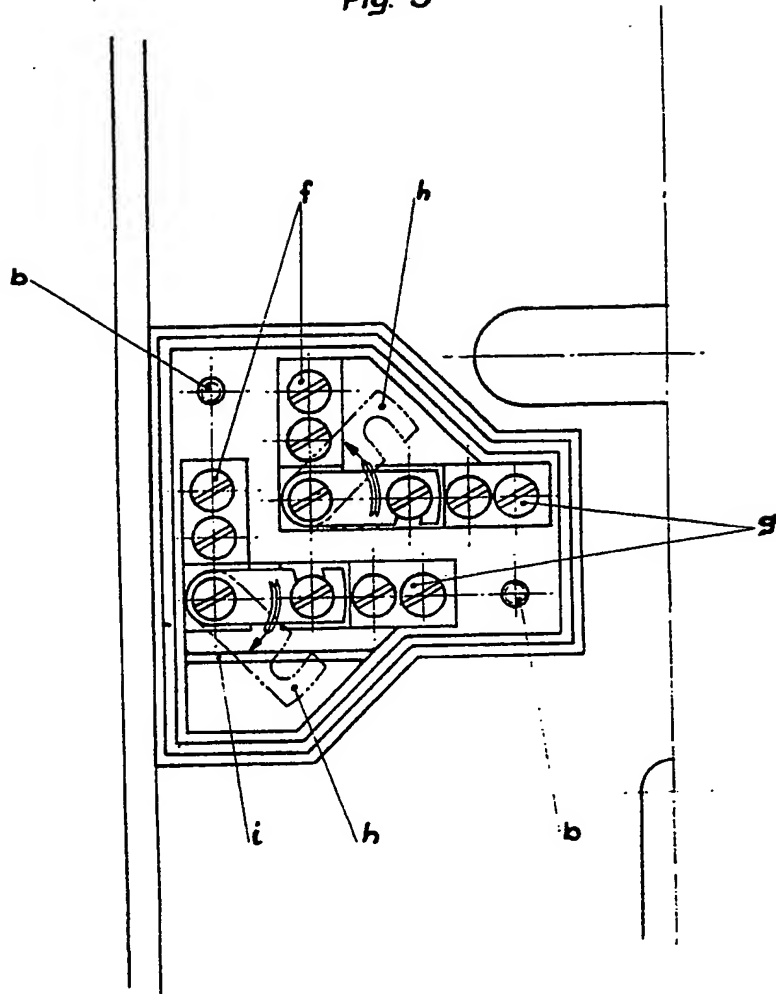


Fig. 4

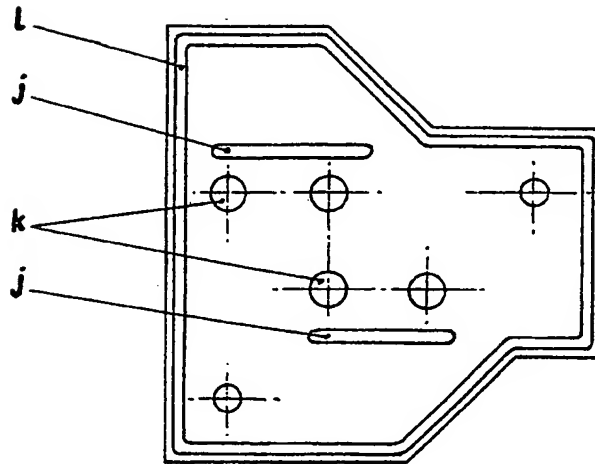


Fig. 5

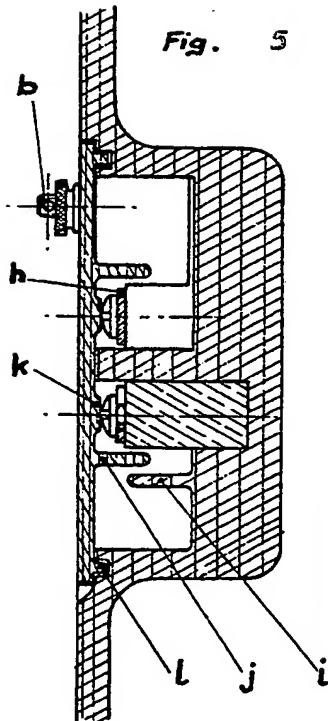
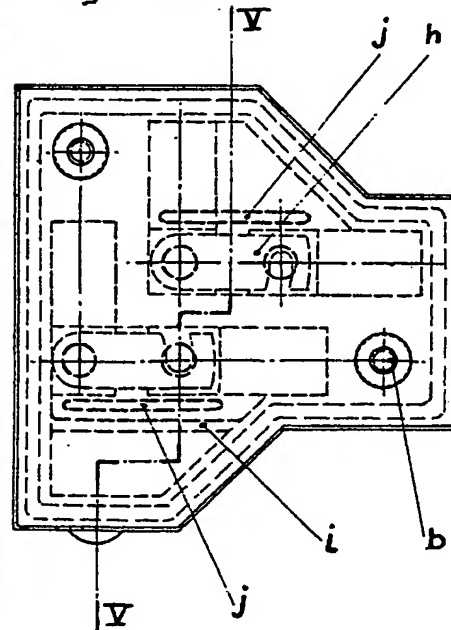


Fig. 6



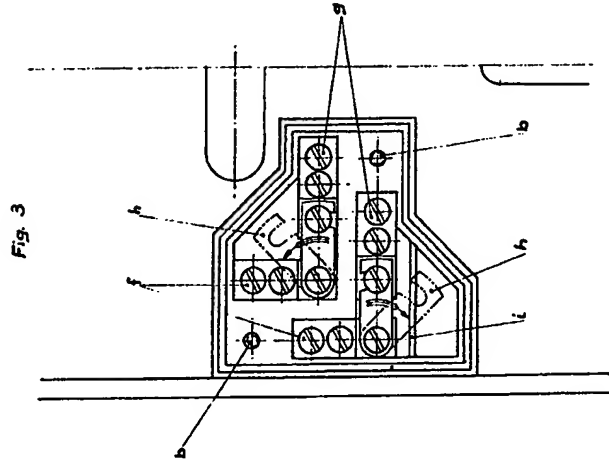


Fig. 3

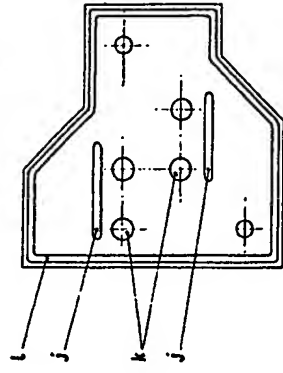


Fig. 4

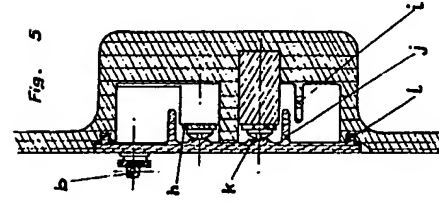


Fig. 5

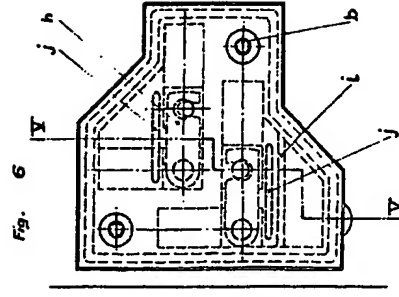


Fig. 6